Service Basic Instructions Bosch Wall Ovens Series 700

Training Session April, 2002

SYSTEM PARTS

- **1. DISPLAY BOARD.** It's mounted on the front panel, it's the oven brain. It handles the user interface (display, keyboard and knob), receives inputs and send information to drive all outputs through the Power Board.
- 2. POWER BOARD. It's mounted on the cooling channel, it provides the Display Board with all its power lines. It manages the latch, the heaters, the auxiliary loads following the Display Board indications. It measures the temperature read by the sensor.
- **3. HEATING ELEMENTS (nominal power at 240V).**

a. UPPER ELEMENT	3500W
b.LOWER ELEMENT	3000W
c. RING ELEMENT	2500W
d.ADDITIONAL ELEMENT	1000W

4. AUXILIARY RELAY BOARD. It's mounted on the front panel. It provides the working fan dual speed (only double oven) and the Double Line Break feature (only for Canadian requirements).

- 5. SAFETY THERMOSTATS. The oven is provided with two safety thermostats. They simply cut off L2 when temperature inside gets too high. The high temperature one (165°C) is always in series with the heaters, the low temperature (110°C) is by-passed during self-clean. They are mounted together, behind the cooling fan.
- 6. KLIXON RELAY BOARD. It's mounted on the cooling channel, to by-pass the low temperature safety thermostat during self-clean.
- 7. TOUCH KEYBOARDS. They can be 6 pads (single oven) or 8 pads (double oven). They are glued on the front panel glass.
- 8. ROTARY SWITCH. It's activated through the knob on the front panel. The control detects rotation verse and number of ticks.
- 9. TEMPERATURE SENSORS. They are mounted inside the cavity, fixed from the outside, on the rear wall. The only mean to measure oven temperature.
- **10.LATCH MECHANISM.** To lock the door when self-clean is running, until the cavity cools down.
- **11.AUXILIARY LOADS.** Working and cooling fans, oven lights, for both cavities.

12.MEAT PROBE. The oven is provided with a meat probe, which needs only to be plugged in its receptacle on the cavity left side wall.

IMPORTANT WARNINGS

- 1. LATCH AUTO-TEST. At power-up, the control runs a latch mechanism self-test. The display shows the message UNLOCKING DOOR until both cavities have completed their lock/unlock cycle. This allows the user to restore the latch position, in case of any problem: turn off the main power supply and wait for a few minutes before re-powering. Each latch takes about 30sec. to run the test. If the control can't complete this test, power down the oven, search for a hardware fault and remove it.
- 2. **BY-PASSING LATCH TEST.** If there is any reason to by-pass the latch test, at power-up, simply keep the [Start] key pressed until the clock is displayed.
- 3. OVEN MODEL SELECTION OR MANUAL TEST. If you intend to enter this special sections, never press [Cooking Mode] key before doing it because the two features will be disabled. In any case, both features must be accessed within 5 minutes from the power-up.

OVEN MODEL SELECTION

This operation is normally executed at the manufacturer facilities. If the display board has to be replaced, the oven model must be reconfigured. At first power-up, the Double Oven is always configured as a 30" both multifunction cavities.

MANUAL TEST ACCESS PROCEDURE:

- 1. Press CANCEL key.
- 2. Turn the knob 4 detents CW.
- 3. Turn the knob 6 detents CCW.
- 4. Press START key.
- 5. The writing MANUAL TEST is displayed.

To reconfigure the oven model as a different double:

- 1. Press [Cooking Mode] key.
- 2. Turn the knob to select the correct oven model.

\mathbf{N}°	MOD	DISPLAY	OVEN MODEL
1	C	30 CONVECT 2	30" DOUBLE OVEN
			MULTIFUNCTION/MULTIFUNCTION
3	D	30 THERMAL 2	30" DOUBLE OVEN
			MULTIFUNCTION/THERMAL
5	G	27 CONVECT 2	27" DOUBLE OVEN
			MULTIFUNCTION/MULTIFUNCTION
7	Η	27 THERMAL 2	27" DOUBLE OVEN
			MULTIFUNCTION/THERMAL

- 3. Press [Start] key to accept the new selection, the control sounds a tone.
- 4. Press [Cooking Mode] key again to quit the oven model menu and going back to manual test procedure.
- 5. Press [Cancel] key.

OVEN MODEL SELECTION SINGLE OVEN

This operation is normally executed at the manufacturer facilities. If the display board has to be replaced, the oven model must be reconfigured. There is only one single part number for the display board then, after having replaced it, also a single oven is configured as a double oven 30" Multifunction/Multifunction.

IMPORTANT: ALWAYS KEEP PRESSED START KEY AT FIRST POWER-UP ON A SINGLE OVEN, UNTIL THE CLOCK IS DISPLAYED.

Otherwise, the control will try to run the latch auto-test but, missing one cavity, it will never be able to complete it. At first power-up, the control realizes that one cavity is missing: the display shows a calibration error message. Ignore it and proceed with the...

MANUAL TEST ACCESS PROCEDURE

- 1. Press CANCEL key.
- 2. Turn the knob 4 detents CW.
- 3. Turn the knob 6 detents CCW.
- 4. Press START key.
- 5. The writing MANUAL TEST is displayed.

To reconfigure the oven model as a single:

1. Press [Cooking Mode] key.

2. Turn the knob to select the correct oven model.

\mathbf{N}°	MOD	DISPLAY	OVEN MODEL
0	Α	30 CONVECT 1	30" SINGLE MULTIFUNCTION
2	В	30 THERMAL 1	30" SINGLE THERMAL
4	E	27 CONVECT 1	27" SINGLE MULTIFUNCTION
6	F	27 THERMAL 1	27" SINGLE THERMAL

- 3. To confirm the selection:
 - a. If the Display Board is still configured as a double, KEEP THE [START] KEY PRESSED UNTIL THE CLOCK APPEARS ON THE DISPLAY. The control resets itself.
 - b. If the Display Board is already configured as a single, press the [Start] key to accept the new selection, the control sounds a tone. Press then [Cooking Mode] key again to quit the oven model menu and going back to manual test procedure.

POWER SUPPLY SELECTION

The oven provides a 208V power supply option, for areas where the standard 240V is not available. First connect the oven to power then, to access this option, follow the procedure below:

240V/208V POWER SELECTION:

- 1. Open the oven door (upper oven for double).
- 2. Turn the knob 6 detents CW.
- 3. Turn the knob 9 detents CCW.
- 4. Press [Start] key.
- 5.240 SELECTED is displayed (or 208 SELECTED).
- 6. Press [Cooking Mode] key to change selection.
- 7. Touch [Start] key to confirm the new selection.

MANUAL TEST

The scope of the test is to check all the control outputs independently. Turn the knob CW to proceed with the following steps.

Single oven has only step 1 to 8.

N°	CAVITY	DISPLAY	ACTIVATED OUTPUT
1	UPPER	UPPER	Upper element (3500W at
		ELEMENT	240V).
2	UPPER	LOWER	Lower element (3000W at
		ELEMENT	240V).
3	UPPER	RING	Ring element (2500W at
		ELEMENT	240V).
4	UPPER	ADDITIONAL	Additional element (1000W
		ELEMENT	at 240V).
5	UPPER	LIGHT	Oven lights are activated.
6	UPPER	CONV. FAN LO	Working fan at low speed.
7	UPPER	CONV. FAN HI	Working fan at high speed.
8	UPPER	COOLING FAN	Cooling fan at ordinary speed.

In a double oven, steps 1 to 8 are for upper cavity, steps 9 to 16 are for the lower one.

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9	LOWE	UPPER	Upper element
	R	ELEMENT	(3500W at 240V).
10	LOWE	LOWER	Lower element
	R	ELEMENT	(3000W at 240V).
11	LOWE	RING	Ring element
	R	ELEMENT	(2500W at 240V).
12	LOWE	ADDITIONAL	Additional element
	R	ELEMENT	(1000W at 240V).
13	LOWE R	LIGHT	Oven lights are activated.
14	LOWE R	CONV. FAN LO	Working fan at low speed.
15	LOWE R	CONV. FAN HI	Working fan at high speed.
16	LOWE R	COOLING FAN	Cooling fan at ordinary speed.

OPERATIONS TO CHECK REMAINING FUNCTIONALITIES

- 1. Latch mechanism and cooling fan high speed. Press [Cooking Mode] key then turn the knob CW until the *CLEAN* mode is found. Press [Start] key once and again when the writing *REMOVE RACKS* appears. The control runs the latch until the door is locked. Just a while before the lock symbol is displayed, the cooling fan switches to high speed. Check that the door is actually fully locked. To unlock the door, press [Cancel] key and wait for the lock symbol on the display disappear. Now the door has to be fully unlocked.
- 2. Door switches and cavity lights. Open the door, if the cavity lights turn on it means that the control has detected a change. Close the door, the lights must turn off. If the lights don't turn on, try to press the [Light] key and be sure to hear a key pressed tone. If the lights still remain off, they are probably broken. If no tone is heard, then the [Light] key is not working.
- 3. **Keyboard and thermal cavities.** Select the lower cavity by pressing [Upper/Lower] key, until the box is displayed in the lower oven position (only for double oven). Press [Cooking Mode] key, *BAKE* will flash. Turn the knob CW until *BAKE* mode is found again. If the cavity is set as thermal, only *BAKE*, *BROIL CLEAN* and *WARMING* must be available. Press [Temperature] key and see that the displayed temperature is flashing. Press [Start] to run the cooking mode then [Lower Cancel] (simply [Cancel] for a single oven) to stop it.

- 4. Meat probe. Plug the meat probe in its receptacle, on the left side in the cavity. In a double oven only the upper cavity can be used for probe cooking. The probe icon on the display must be shown whenever the probe is inserted. If it blanks or flashes a problem in the connection may exist. Only *BAKE*, *CONVECTION BAKE*, *CONVECTION BAKE*, *CONVECTION BAKE* and *FAST PREHEAT CONVECTION BAKE* must be available for cooking. When probe cooking is running or before starting, press [Temperature] key:
 - a. Once, to edit the probe temperature edit state (probe icon and temperature flash).
 - b. Twice, to edit the cavity temperature (temperature flashes).

When probe cooking is running, the actual probe temperature is displayed.

5. **[Time] key + knob.** Press [Time] key, *TIMER* is displayed. Press it once again, in the time area 0:00 starts flashing. Turn the knob 5 detents CW and check that time increments by one each detent until 0:05 is displayed, then turn 5 detents CCW and check that time decrements by 1 each detent until the timer is back to 0:00. Press [Time] key again to display the clock again.

NOTE: This last five actions allows to check all the devices which haven't been tested yet during the Manual Test, including the keyboard and the rotary switch.